

REMARKS

By this amendment the Applicant respectfully adds claims 26-30 for examination. Therefore, on entering this amendment, claims 15-30 are all the claims pending in the application.

Claims 15-20, 22 and 24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Parulskie (5,828,406).

Claims 15, 17-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Ishimoto (5,594,564).

Claims 15, 17-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Aoki (4,654,117).

Claim 25 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Parulskie (5,828,406).

Claims 16 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishimoto (5,594,564).

Claims 16 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki (4,654,117).

The Applicant traverses the rejections and request reconsideration.

General Remarks

The Applicants thank the Examiner for the comments and suggestions during the interview held on April 24, 2003.

Specifically, the Examiner appears to have reversed his position that the limitation that the display system is a black and white limitation is only an intended use. As noted in the Interview Summary, this limitation is not an intended use but a structural limitation deserving patentable weight.

Further, the Examiner notes in the paragraph titled “Allowable subject matter,” that claims that include a pixel density three times larger in the horizontal direction than in the vertical direction would be allowable. Accordingly, the present claim 21 and the newly added claims 25-30 should be allowed.

Rejection of claims 15-20, 22 and 24 under Section 102(e) based on Parulskie

Parulskie teaches a color image display system. Regarding one picture element for each R, G and B on a display, the density of the picture element in the horizontal direction is higher than that in the vertical direction.

However, since the picture element is a minimum unit for representing the image on a display in the present invention, a set of three picture elements for (R, G, B) of Parulskie correspond to the picture element of the present invention. It should be noted that, a single element of any one picture element of R, G and B cannot represent an image. A set of three picture elements of R, G and B is the minimum unit required for representing the image. Therefore, Parulskie, by no stretch of imagination can be teaching or suggesting that the density of the “picture element” in the horizontal direction is higher than that in the vertical direction.

Rejection of claims 15, 17-24 under Section 102(e) based on Aoki

Please see the arguments under the sub-section titled “General Remarks” regarding the rejection of claim 21.

Aoki also teaches a color image display system. Therefore, the arguments discussed above regarding Parulskie are analogously valid for the rejections based on Aoki.

Rejection of claims 15, 17-24 under Section 102(e) based on Ishimoto

Please see the arguments under the sub-section titled “General Remarks” regarding the rejection of claim 21.

Ishimoto merely teaches a system for displaying one-dimensional hologram and does not teach a black and white display system. Further, in Ishimoto, the purpose of heightening the density in the horizontal direction is to reproduce the phase distribution of the one-dimensional hologram in high accuracy. However, unlike the present invention, Ishimoto does not take into account the characteristics of human visual response in different directions. Therefore, Ishimoto, does not anticipate the black and white display system as in the present invention.

Rejection of claim 25 under Section 103(a) as being unpatentable over Parulskie

Claim 25 is dependent on claim 16, which includes limitations similar to claim 15. Therefore, the reasons discussed above for the patentability of claim 15 are analogously valid.

Rejection of claims 16 and 25 under Section 103(a) as being unpatentable over

Ishimoto

As noted above, claim 16 includes limitations similar to claim 15. Therefore, claims 16 and 25 are patentable at least for reasons analogous to the ones discussed above.

Rejection of claims 16 and 25 under Section 103(a) as being unpatentable over Aoki

As noted above, claim 16 includes limitations similar to claim 15. Therefore, claims 16 and 25 are patentable at least for reasons analogous to the ones discussed above.

CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Chidambaram Subramanian
Registration No. 43,355

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE
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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The following new claims are added:

26. (NEW) A black and white image display system in which an image signal is reproduced as a visual image on a pixelized screen having a number of picture elements arranged in horizontal and vertical directions, wherein the improvement comprises that

the density of the picture elements in the horizontal direction is three times higher than that in the vertical direction

in which said image signal is such read out in such a manner that the density of the picture elements in the horizontal direction becomes higher than that in the vertical direction.

27. (NEW) A black and white image display system in which an image signal is reproduced as a visual image on a pixelized screen having a number of picture elements arranged in horizontal and vertical directions, wherein the improvement comprises that

the density of the picture elements in the horizontal direction is three times higher than that in the vertical direction

in which said image signal is such read out on the basis of picture elements whose dimensions are larger in the vertical direction than in the horizontal direction.

28. (NEW) A black and white image display system in which an image signal is reproduced as a visual image on a pixelized screen having a number of picture elements arranged in horizontal and vertical directions, wherein the improvement comprises that

the density of the picture elements in the horizontal direction is three times higher than that in the vertical direction

in which said image signal is such read out on the basis of picture elements whose dimensions are larger in the vertical direction than in the horizontal direction and at the same time whose density is higher in the horizontal direction than in the vertical direction.

29. (NEW) An image display system as defined in Claim 21 in which said pixelized screen comprises a liquid crystal panel.

30. (NEW) An image display system as defined in Claim 21 in which a maximum brightness of the picture elements is higher than 800nit.